INVESTIGATOR'S ANNUAL REPORT

National Park Service

All or some of the information provided may be available to the public

Reporting Year: 1999	**Park:** Shenandoah NP
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Permit#: SHEN1999N-234	
Park-assigned Study Id. #: unknown	
Project Title: Forest Vegetation, Watershed Topography, And Nitrogen Export In The Shenandoah National Park	
Permit Start Date: Jan 01, 1999	**Permit Expiration Date** Jan 01, 2000
Study Start Date: Jan 01, 1998	**Study End Date** Jan 01, 2000
Study Status: Completed	
Activity Type: Research	
Subject/Discipline: Ecology (Aquatic, Marine, Terrestrial)	
Objectives: The Paine Run watershed within the Shenandoah National Park was one of nine Mid-Atlantic watersheds used for vegetation sampling, with the objective being to examine forest vegeation distribution relative to topography. Vegetation data for Paine Run was collected during summer of 1998. Specific goals of vegetation-topography analyses during 1999 included: (1) Quantifying forest tree composition and community characteristics of multiple small forested watersheds in the Mid-Atlantic region; and (2) Relating forest plant associations and species to watershed topography.	
Findings and Status: Vegetation within watersheds of the Mid-Atlantic region are dominated by widely-tolerant species that are relatively unspecialized in terms of topography. This dominance results in many similar plant associations among watersheds that are seldom related to watershed topography. Plant associations characterized by species with narrower physical tolerances are more readily recognized along topographic gradients.;Regionally, basal area for several species is predictable from topographic variables (elevation, aspect, percent slope, relative slope position). Not surprisingly, some of these species are diagnostic of plant associations. However, the ability to predict species basal area from field data is highly dependent on samples from low disturbance forest stands.;Plot-level topographic variables that can be used to predict distribution of some tree species are not predictive of other stand characteristics, such as coarse woody debris, total basal area, or tree regeneration. Although the spatial distribution of these characteristics can be mapped within watersheds based on field data, they are unlikely to be viable for extrapolation over large areas because disturbance impacts are not spatially predictable.	
For this study, were one or more specimens collected and removed from the park but not destroyed during analyses? No	
Funding provided this reporting year by NPS: 0	**Funding provided this reporting year by other sources:** 0
Fill out the following ONLY IF the National Park Service supported this project in this reporting year by providing money to a university or college	

Full name of college or university:	Annual funding provided by NPS to university or college this reporting year:
n/a	0